

Stabilizing and Drying Techniques

1. Freezing to buy time

- The sooner the better
- Arrests bleeding dyes, running inks, and mold growth

2. Freezer drying

Advantages

- Easy and immediate solution

Disadvantages

- Very slow
- Suitable for small quantities only

3. Air drying

Fans and dehumidifiers in the space speed drying.

Advantages

- Inexpensive, gentle, allows physical adjustment of materials during drying
- Objects stay “at home”
- In conjunction with freezing, allows drying of small lots as time, space and labor dictate

Disadvantages

- Risk of mold
- Requires space, time, attention, absorbent materials, labor intensive
- May be inexpensive up front, but, for books, there are hidden costs in the form of rebinding and additional shelf space.

4. Dehumidification/desiccant drying

Materials are dried in a dedicated, humidity-controlled chamber, either at a service provider’s facility or in a chamber constructed on-site by a service provider.

Advantages

- Quick, allows physical adjustment of materials during drying
- Less costly
- Allows access to priority information if needed (medical records, town records, curatorial information, etc)

Disadvantages

- Requires special facility or dedicated space with security
- Attention is required to avoid mold, and not to over-dry materials

5. Vacuum freeze drying

Frozen materials are placed in a vacuum chamber. A vacuum is pulled, and a source of low heat is introduced. The materials are dried at temperatures below 32° F, so that they remain frozen throughout the process. Sublimation takes place- i.e., ice crystals vaporize without melting.

Advantages

- No additional wetting, swelling, bleeding of colors, or distortion takes place
- Coated papers do not stick
- Dirt falls away

Disadvantages

- Costly
- Some distortion still occurs
- Materials must be transported away from site
- No access to materials while at vendor's

6. Vacuum thermal drying

A vacuum is drawn. Heat is introduced, and materials are dried above 32° F.

Advantages

- Quick and "least expensive" method --- maybe

Disadvantages

- Additional wetting and heating allows renewed swelling, bleeding of colors, and severe distortion.
- Coated papers stick
- Organic materials are aged by heat
- Materials must be transported away from site